

**What is claimed is:**

1. A method of reserving an execution thread comprising:  
describing a selected processing unit as a peripheral device in a device description;  
preventing peripheral devices from using the selected processing unit; and  
providing a processor description including one or more available processing units to an operating system, wherein the selected processing unit is omitted from the processor description.
2. The method of claim 1 further comprising:  
reading the device description of the selected processing unit;  
recognizing the device description of the processing unit as a device description of a peripheral device;  
retrieving a device driver for the processing unit based on the device description of the selected processing unit; and  
allocating resources to the selected processing unit based on a request from the driver.
3. The method of claim 2 further comprising communicating with the processing unit as a peripheral device via the driver.
4. The method of claim 1, wherein the device description comprises an identification unique to the selected processing unit.

5. The method of claim 1, wherein the device description comprises at least one of the following: vendor identification, device identification, allocated address space, interrupt capabilities, basic input/output system code address and power saving capabilities.

6. The method of claim 1, wherein describing the selected processing unit comprises describing the selected processing unit as a peripheral device in a bus configuration header.

7. The method of claim 1, wherein describing the selected processing unit comprises creating the device description and setting device configuration values for the selected processing unit.

8. The method of claim 1, wherein describing the selected processing unit comprises describing the selected processing unit as a peripheral device in a device configuration description within a bus configuration space.

9. The method of claim 1, wherein preventing peripheral devices from using the selected processing unit comprises modifying an interrupt controller to prevent the selected processing unit from receiving interrupt requests.

10. The method of claim 1, wherein providing the processor description of one or more available processing units to an operating system comprises providing a power management table to the operating system, wherein the power management table includes a description of all available processing units except the selected processing unit.

11. The method of claim 1 further comprising enabling a processor to allow the device description to be written and notifying the selected processing unit of the device description.

12. The method of claim 1 further comprising accessing the selected processing unit from a front side bus and from a processor.

13. The method of claim 1 further comprising executing at least one of the following using the selected processing unit: a system health monitor, an operating system kernel external to the operating system, a device, a system performance enhancement, a network stack partition, and server management.

14. The method of claim 1, wherein the processing unit comprises a logical processing unit related to one or more execution threads.

15. The method of claim 1, wherein the processing unit comprises a processing core related to one or more execution threads.

16. A basic input/output system program performing the method of claim 1.
17. A method of reserving an execution thread comprising:  
searching for device descriptions of peripheral devices;  
reading a device description relating to a processing unit, the device description comprising an identification relating to the processing unit;  
recognizing the device description of the processing unit as a device description of a peripheral device;  
retrieving a driver for the processing unit based on the identification; and  
allocating resources to the processing unit based on a request from the driver.
18. The method of claim 17 further comprising communicating with the processing unit as a peripheral device via the driver.
19. The method of claim 17 wherein searching for device descriptions comprises reading bus configuration headers and reading the device description relating to the processing unit comprises reading a bus configuration header written for the processing unit.
20. The method of claim 17, further comprising reading a description of a processor including one or more available processing units, wherein the processing unit is omitted from the processor description.

21. An operating system performing the method of claim 17.
22. An article of manufacture comprising:
- a computer readable memory;
  - a routine stored on the computer readable memory and adapted to be executed on a processor to describe a selected processing unit as a peripheral device in a device description;
  - a routine stored on the computer readable memory and adapted to be executed on a processor to prevent peripheral devices from using the selected processing unit; and
  - a routine stored on the computer readable memory and adapted to be executed on a processor to provide a processor description including one or more available processing units to an operating system, wherein the selected processing unit is omitted from the processor description.
23. The article of manufacture of claim 22 wherein the routine to describe a selected processing unit as a peripheral device in a device description comprises a routine stored on the computer readable memory and adapted to be executed on a processor to describe the selected processing unit as a peripheral device in a bus configuration header.

24. The article of manufacture of claim 22, wherein the routine to describe a selected processing unit as a peripheral device in a device description comprises a routine stored on the computer readable memory and adapted to be executed on a processor to create the device description and set device configuration values for the selected processing unit.

25. The article of manufacture of claim 22, wherein the routine to prevent peripheral devices from using the selected processing unit comprises a routine stored on the computer readable memory and adapted to be executed on a processor to modify an interrupt controller to prevent the selected processing unit from receiving interrupt requests.

26. The article of manufacture of claim 22, wherein the routine to provide the processor description comprises a routine stored on the computer readable memory and adapted to be executed on a processor to provide a power management table to the operating system, wherein the power management table include a description of all available processing unit except the selected processing unit.